MIDDLE ATLANTIC
Region 1
HHS-N-276-2011-00003-C
Acquisition of Technology to Facilitate Collaboration and
Active Learning in a Teaching Hospital
Saint Barnabas Medical Center
Medical Library
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Table of Contents

Executive Summary

The primary goal for this project in the Medical Library of our 597-bed teaching hospital (Saint Barnabas Medical Center in Livingston, NJ) was to improve access to health information services through technology to enhance student learning and encourage collaboration. Our target population was the more than 300 medical students, residents and nursing students who rotate through our hospital. We chose this population because they are frequent users of our medical library and we wanted to engage them more in active learning. The major part of our project was to install a large screen monitor (55 inches) and workstation in our library's conference room so that the room could be used for teaching and discussion enhanced by Power Point presentations, our library's online resources, and direct access to other educational internet sites, such as evidence-based medicine and evidence-based nursing sites. In addition, under the project we were able to purchase a stand-alone computer with a scanner and also Adobe Standard X (pdf "writing") software for that computer. Finally we were able to purchase a laptop for the librarians to use to allow us to be more mobile for teachable moments throughout the hospital. While all the technology purchases have been well-received, by far the large screen monitor has truly transformed our conference room into much more of an active learning and technology-rich space. The instructors from the numerous nearby nursing schools who have students doing rotations in the hospital have enjoyed using the technology to enhance their teaching. We look forward to inviting our new groups of residents and medical students who will be arriving soon to use the new technology in the library.

Minority Populations Served

African Americans: No
American Indians/Alaska Natives: No
Asian Americans: No
Hispanics/Latinos: No
Native Hawaiians and Pacific Islanders: No
Other: No

Approaches and Interventions Used

For the most part our project involved choosing the best technology products for our project. We talked with our IT&S staff, other librarians and did internet research on scanners and large screen monitors. For the standard desktop pc and the laptop, we chose the models that are standard for our hospital and that our IT&S staff is used to servicing. We bought Microsoft licenses for the products we purchased. We asked the head of our IT&S department to review our proposed project and to write a letter of support to send in with our award application, which she did. We wrote an item which appeared in our hospital's weekly online newsletter in January, announcing that the library had received the award and describing what would be purchased. For the medical students, residents and nursing students, we advised the instructors and program administrators of the availability of the large screen monitor and workstation in the library's conference room and encouraged them to reserve the room for teaching, presentations and collaborative gatherings requiring a computer.

Evaluation Activities

As noted in the previous section, our technology improvements have only been operational for a few weeks. We have done assessments/questionnaires for both the stand-alone scanner and for the large screen monitor and computer in the conference room. For the latter, there are questions directed both to the instructor/teacher/presenter about the new technology, as well as to the students/attendees. While we did get a late start on the evaluations by our users, we intend to continue the evaluations for at least a month. This will give us more input on the projects and suggestions for improvements from the users. We have not had the opportunity yet to use the laptop, but we anticipate using it in the future at nursing competency days, health fairs, and throughout the hospital in places where there are no computers.

So far, the evaluations have shown that users like the stand-alone scanner and for the most part found the directions easy to follow. We may tweak them a bit. For the three presentations that have been held in the conference room where the large screen monitor was used, the responses on the questionnaires by both the instructors and the students were very positive. One of the first instructor/users had trouble with the audio at first, but the class members helped figure out the problem on their own. One nursing class used the room for simulated learning on a nursing online program that allowed the students to create avatars for themselves. Then they were directed into different "virtual" hospital rooms with patient avatars and the students interacted with the patients as might happen in a real setting. The answers to the questionnaires showed that all nursing instructors who have used the technology in the conference room so far have discussed evidence-based nursing.

Problems or Barriers Encountered

While our award was announced to us in December, 2011, our proposal required some minor changes and for us to formally agree to certain conditions. We were not able to start activity under the award until we had the official signed contract. We received the final award email in early January of 2012. Because we are a large organization with many safeguards in place before major purchases can take place, we found that starting in January made it a bit difficult to get everything bought, delivered, installed and up and working by the April 30, 2012 deadline.

When we got the official award notice we first checked to see if any of the prices had increased from the price quotes which had been submitted in November, 2011. The quote for the large screen monitor had gone up a modest amount. We asked the NNLM/MAR to increase our award by that amount and the staff there graciously agreed to do so. We had researched and included in the award a locking podium upon which to place our keyboard and mouse and possibly the workstation (in a lower locking cabinet). Unfortunately under the Federal terms of the award funds, the podium was considered "furniture," which was not an approvable purchase. We removed that item from our application. For now our keyboard, mouse and the APC power strip for the larger than usual workstation is on an old library book cart and the large workstation/cpu is on the floor. While not aesthetically pleasing, it does serve the purpose for now. We hope to buy a locking podium or some other locking cart for the unit when we can find the funds to do so.

We entered our technology item and labor cost orders into our purchasing system on January 19. Many of the items arrived in mid to late February. Some of the other items arrived in March. Then we ran into some logistical problems with getting everything installed. Normally it would not have been a problem, but the hospital is working under a tight deadline of June 3 to go live with first part of a new electronic clinical information system. Obviously for this high priority project, the IT&S staff is working long hours. We were finally able to get everything installed and operating within the past few weeks. Out IT&S staff has been helpful in getting our project up and running, despite the time constraints.

Continuation Plans

Our plans are to use our exciting, newly-acquired technologies to make our library a more actively used space by students and other hospital staff. In the past, the librarians had to stop our work and use our ILL book scanner to help students and other users make scans they needed for publications or for residency applications, etc. Now we have the stand-alone scanner with clear directions next to it, so that users can scan items on their own. This saves us time. Our bookings for our library conference room are increasing as word spreads about our large screen presentation technology. The two librarians plan to use the room this summer to hold orientation sessions for medical students and the new residents. We plan to show our online resources on our website and highlight some important EBM sites as well. As mentioned above, we plan to use our laptop more as opportunities arise, for nursing in-service days, health fairs and out-of-the-library teaching opportunities. At some point in the future we would like to do clinical librarianship where we would be on the floors for rounds or in meetings after rounds, where we could use our laptop to do research on the spot.

Impact

While our project has only recently been completed, the response so far has been very positive. Since we are a teaching hospital, the addition of a technology-enhanced teaching space within the library certainly contributes to the mission and priorities of the hospital.

As an example of the success of the project, we will cite the experience with one of the many nursing classes who reserve our conference room. The room is reserved approximately once a week by the instructors from four or five nursing schools in the area. They have been reserving it for several years just as a "passive" meeting room. There was no technology in the room. On one of the first days the large screen monitor and computer (with internet) was available, a nursing instructor used the computer to have her class participate in an online virtual reality/simulation nursing program. Each student had their own avatar and then they proceeded to virtually enter a patient's room and ask questions and perform other "virtual" nursing activities. Both the students and the instructor enjoyed this learning experience that would not have been possible to do in our conference room just a week before the monitor and computer was installed.

As far as sharing information about our project and lessons learned from it, I plan to share news of our project with my fellow members of the Health Sciences Library Association of New Jersey (HSLANJ).

Lessons Learned

We did order our technology items very soon after we received our award, and I would encourage potential awardees to place product orders as quickly as possible. Time passes fast and if the process gets snagged, it can really put the project behind. We also suggest spending a lot of time up front looking at the specs and making sure the technology items are compatible with each other (if they need to be). Fairly late in the ordering process, a person in our corporate ordering system questioned whether the workstation for our 55-inch monitor would be robust enough. In fact, it would not have been, and we upgraded to a different model. There was not much of a price difference and we found funds to pay for it outside of the award, but it was good to have lots of people looking at the configurations. Also we found that in addition to doing your own advertising about the new technology purchased, it's a good idea to ask your early users to spread the word. Our initial users were very pleased and talked positively about it to others who have since asked to reserve the room.

Other

I will be sending in our financial documentation on or before April 30, 2012.

Attachment 1: AR summary data: Subcontractor activities